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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,902	11/12/2003	John Warren Maly	200207608-1	9445
22879	7590	01/25/2008		
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			EXAMINER MERANT, GUERRIER	
			ART UNIT 2117	PAPER NUMBER
			NOTIFICATION DATE 01/25/2008	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

JERRY.SHORMA@HP.COM  
mkraft@hp.com  
ipa.mail@hp.com

## Office Action Summary

Application No.

10/712,902

Applicant(s)

MALY ET AL.

Examiner

Guerrier Merant

Art Unit

2117

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/ are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

**FINAL REJECTION**

***Response to Amendment***

1. Applicant's arguments/amendment filed 11/08/07 have been fully considered but they are not persuasive. Therefore, this action is made final (See MPEP 706.07a).
2. Claims 1, 4 and 22 have been amended. Claim 5 is cancelled and claims 1-4 and 6-22 are pending.
- 3.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Amendments with regards to previous 35 U.S.C. 112, second paragraph rejections have been accepted, therefore, the prior 35 U.S.C. 112, second paragraph rejections are withdrawn.

***Claim Rejections - 35 USC § 101***

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Amendments with regards to previous 35 U.S.C. 101 rejections have been accepted, therefore, the prior 35 U.S.C. 101 rejections are withdrawn.

***Response to Arguments***

6. Applicants contend that the prior art of record, Goto, "does not generate the expected outputs based on the detected inputs." And "Goto's expected patterns are not generated based on the input pattern, but are generated on advance with the input patterns."

The Examiner respectfully disagrees. Goto discloses a computer implemented method of verifying events generated by an agent, said method comprising:

detecting an input signal at an input of said agent, device (e.g. items 101 & 102, fig. 1- col. 11, lines 44-49);

generating an expected output signal based at least in part on said input signal (e.g. agent or item 2 receives an input signal at line 1 and generates an output signal based on the input signal at line 3- see fig, 2- col. 12, lines 14-21).

Due to the reasons stated above, the Examiner maintains rejections with respect to claims 1-4 and 6-22. Goto teach the limitations that the Applicants suggest distinguish from the prior art. Therefore, Claims 1-4, and 6-22 are not patentably distinct or non-obvious over the prior art of record as presented.

### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-4 and 6-22 are rejected under 35 U.S.C. 102(b) as being anticipated by **Goto (US 5,617,429)**.

Claim 1: **Goto** teaches a computer implemented method of verifying events generated by an agent, said method comprising:

detecting an input signal at an input of said agent (*e.g. col. 11, lines 44-49*);  
generating an expected output signal based at least in part on said input signal  
and detecting an output signal at an output of said agent, wherein said output signal is a translation of said input signal generated by said agent (*e.g. col. 12, lines 14-21*);

comparing said output signal with said expected output signal to verify whether said agent produced said output signal correctly based on said input signal and signaling an error if said agent or device did not produce said output signal correctly (*e.g. col. 11, lines 66-67 & col. 12, lines 1-13*).

Claim 2: **Goto** teaches a method as in claim 1 above, further comprising signaling an error if said output signal does not correctly match said expected output signal (*e.g. col. 12, lines 63-67 & col. 13, lines 1-3*).

Claim 3: **Goto** teaches a method as in claim 1 above, further comprising signaling an error if said output signal has no corresponding expected output signal. (*e.g. col. 12, lines 63-67 & col. 13, lines 1-3*).

Claim 4: **Goto** teaches an apparatus for producing expectations to verify events or signals generated by an agent or device comprising: at least one computer readable medium and computer readable program code stored on said at least one computer readable medium, said computer readable program code comprising:

program code for monitoring, detecting at least one input of said agent for a stimulus (*e.g. col. 11, lines 44-49*);

program code for generating an expectation of an event or output, based at least in part on said input, wherein said event or output is expected to be generated by said agent as a result of said stimulus (*e.g. col. 12, lines 14-21*);

program code for monitoring, detecting at least one output of said agent for said event and program code for signaling an error if said event is not detected at said at least one output (*e.g. col. 11, lines 66-67 & col. 12, lines 1-13*).

Claim 6: **Goto** teaches an apparatus as in claim 4 above, further comprising program code for signaling an error if said an event is detected at said at least one output for which no expectation has been produced (*e.g. col. 12, lines 63-67 & col. 13, lines 1-3*).

Claim 7: **Goto** teaches an apparatus as in claim 4 above, wherein said program code for monitoring said at least one input of said agent for said stimulus comprises program code for monitoring at least one input of a memory agent for said stimulus (*e.g. col. 11, lines 44-49*), said stimulus being selected from a group consisting of an initial request to

perform a memory operation, a snoop response, and a read response (e.g. col. 1, lines 29-35; col. 13, lines 35-54).

Claim 8: Goto teaches an apparatus as in claim 4 above, wherein said program code for monitoring said at least one input of said agent for said stimulus comprises program code for identifying said stimulus using correlative information in said stimulus (e.g. col. 12, lines 33-52).

Claim 9: Goto teaches an apparatus as in claim 8 above, wherein said correlative information comprises transaction identification (e.g. col. 14, lines 1-7).

Claim 10: Goto teaches an apparatus as in claim 8 above, wherein said correlative information comprises an address of memory being accessed by said stimulus and an identity of a source of said stimulus (e.g. col. 14, lines 8-25).

Claim 11: Goto teaches an apparatus as in claim 4 above, wherein said program code for monitoring said at least one input of said agent for said stimulus comprises program code for gathering said stimulus from a plurality of separately transmitted portions (e.g. col. 14, lines 9-20).

Claim 12: Goto teaches an apparatus as in claim 11 above, wherein said program code for gathering said stimulus from said plurality of separately transmitted portions

comprises program code for establishing a watch list, said watch list containing an entry for each stimulus for which said separately transmitted portions are being awaited (e.g. col. 14, lines 20-40), and wherein said program code for monitoring said at least one input of said agent for said stimulus comprises: program code for detecting one of said separately transmitted portions at said at least one input; program code for searching said watch list for said stimulus for which said one of said separately transmitted portions was being awaited and program code for adding said one of said separately transmitted portions to said stimulus (e.g. col. 15, lines 51-65).

Claims 13: Goto teaches an apparatus as in claim 4 above, wherein said program code for producing said expectation of said event comprises program code for creating a transaction record to contain information relating to a memory transaction involving said agent (e.g. col. 15, lines 35-50).

Claim 14: Goto teaches an apparatus as in claim 13 above, wherein said program code for producing said expectation of said event further comprises: program code for creating an expectation record to contain information relating to an expected event from said agent; and program code for associating said expectation record with said transaction record (e.g. col. 15, lines 44-65).

Claim 15: Goto teaches an apparatus as in claim 4 above, wherein said program code for producing said expectation of said event comprises program code for storing



expected data associated with said expectation (e.g. col. 14, lines 9-20), said expected data being received in a plurality of separate incoming transmissions in said stimulus, said expected data being expected to be transmitted by said agent in a plurality of separate outgoing transmissions in said event (e.g. col. 14, lines 8-20).

Claim 16: **Goto** teaches an apparatus as in claim 15 above, further comprising: program code for comparing said expected data with actual data in said event (e.g. col. 15, lines 3-11); program code for signaling an error if said expected data does not match said actual data and program code for signaling an error if said actual data is not expected (e.g. col. 26-35).

Claim 17: **Goto** teaches an apparatus as in claim 15 above, further comprising program code for signaling an error if any of said plurality of separate outgoing transmissions is detected before all of said plurality of separate incoming transmissions have been received (e.g. col. 26-35).

Claim 18: **Goto** teaches an apparatus as in claim 15 above, wherein said program code for monitoring said at least one output of said agent for said event begins monitoring said at least one output for said plurality of separate outgoing transmissions as soon as a first of said plurality of separate incoming transmissions has been received (e.g. col. 16, lines 42-58).

Claim 19: **Goto** teaches an apparatus as in claim 18 above, wherein said program code for storing said expected data comprises identifying said first of said plurality of separate incoming transmissions using correlative information in said first of said plurality of separate incoming transmissions (e.g. col. 12, lines 33-52) and further comprising identifying subsequent transmissions of said plurality of separate incoming transmissions by their being contiguously transmitted on a same input of said agent as said first (e.g. col. 11, lines 8-20).

Claim 20: **Goto** teaches an apparatus as in claim 19 above, wherein said same input of said agent comprises a same physical and virtual input channel (e.g. col. 17, lines 10-20).

Claim 21: **Goto** teaches an apparatus as in claim 18 above, wherein said program code for storing said expected data comprises identifying each of said plurality of separate incoming transmissions using correlative information in said each of said plurality of separate incoming transmissions to enable gathering and sorting of interleaved transmissions belonging to different stimuli (e.g. col. 12, lines 33-52; col. 14, lines 8-25).

Claim 22: **Goto** teaches an apparatus for testing an agent in a computer system, comprising:

means for detecting at least one incoming message as it is received by said agent (e.g. col. 11, lines 44-49);

means for generating at least one expected outgoing message that should be produced by said agent in response to said incoming message, wherein said at least one expected outgoing message is generated at least in part based on said at least one incoming message (e.g. col. 12, lines 14-21);

and means for verifying whether said agent generates an outgoing message matching said expected outgoing message and means for signaling an error if said agent does not generate an outgoing message matching said expected outgoing message (e.g. col. 11, lines 66-67 & col. 12, lines 1-13).

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Application/Control Number:  
10/712,902  
Art Unit: 2117

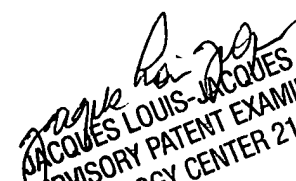
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Exr. Merant Guerrier whose telephone number is (571) 270-1066. The examiner can normally be reached Monday through Thursday from 10:30 a.m. to 3:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jacques Louis Jacques, can be reached on (571) 272-6962. Draft or Informal faxes, which will not be entered in the application, may be submitted directly to the examiner at (571) 270-2066.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Guerrier Merant  
01/18/08

  
JACQUES LOUIS-JACQUES  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100